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## VEHICLE ANTI-THEFT KEY WITH TRANSPONDER

## **ABSTRACT**

The design of a vehicle anti-theft key with transponder enhances manufacturability and protects the transponder from damage due to mechanical shock. The key includes a shank, a transponder, a shuttle, and a head. A transponder recess formed in the shuttle is sized to tightly receive the transponder, and a shank recess formed in the shuttle is configured to receive one end of the key shank. The key is assembled by inserting the transponder in the transponder recess and the key shank in the shank recess. A key head is then positioned about the shuttle, transponder, and shank end, preferably by means of a polymeric molding process. The transponder recess and shank recess are configured to ensure proper positioning of the transponder and key shank in their respective recesses.

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